



## Material - UNS J03012

### Standard Specification for Carbon Steel Casting

Group - Ferrous Mild Steel Alloys

Sub Group - UNS J03012 Carbon Steel Casting

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

Grade Belongs to the Industry - Casting

| Chemical Composition |      |               | Heat Treatment                                                                                                                                                                                                                              |  |
|----------------------|------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Carbon               | C %  | 0.280 - 0.340 | As- Cast or Normalising or Annealing or Hardening + Tempering                                                                                                                                                                               |  |
| Silicon              | Si % | 0.300 - 0.600 |                                                                                                                                                                                                                                             |  |
| Manganese            | Mn % | 0.500 - 0.900 |                                                                                                                                                                                                                                             |  |
| Phosphorus           | P %  | 0.040 max.    |                                                                                                                                                                                                                                             |  |
| Sulphur              | S %  | 0.040 max.    |                                                                                                                                                                                                                                             |  |
| Iron                 | Fe % | Balance       |                                                                                                                                                                                                                                             |  |
| -                    | -    | -             | <b>Mechanical Properties</b><br>Tensile Strength in Mpa      470 min.<br>Yield Strength in Mpa      260 min.<br>Elongation in %      20 min.<br>Reduction of Area in %      -<br>Hardness in BHN      137<br>Impact in Joule      75 J @ RT |  |
| -                    | -    | -             |                                                                                                                                                                                                                                             |  |
| -                    | -    | -             |                                                                                                                                                                                                                                             |  |
| -                    | -    | -             |                                                                                                                                                                                                                                             |  |
| -                    | -    | -             |                                                                                                                                                                                                                                             |  |
| -                    | -    | -             |                                                                                                                                                                                                                                             |  |
| -                    | -    | -             |                                                                                                                                                                                                                                             |  |
| -                    | -    | -             |                                                                                                                                                                                                                                             |  |
| -                    | -    | -             |                                                                                                                                                                                                                                             |  |
| -                    | -    | -             |                                                                                                                                                                                                                                             |  |

| Cross Reference Table |          |           |                              |
|-----------------------|----------|-----------|------------------------------|
| Material              | Standard | Country   | Grade Belong to the Industry |
| 1030.0000             | AISI     | USA       | Bar, Wire, Tube and Forging  |
| 1030                  | SAE      | USA       | Bar, Wire, Tube and Forging  |
| 1030                  | AS       | Australia | Bar, Wire, Tube and Forging  |
| 1030                  | AMS      | USA       | Bar, Wire, Tube and Forging  |
| A915 Grade SC 1030    | ASTM     | USA       | Casting                      |
| -                     | -        | -         | -                            |
| -                     | -        | -         | -                            |

**Further any inquiry to discuss with Gravity Cast Pvt. Ltd. – Gravity Group of Companies team member Call on +918469160029, or email [marketing@gravitycastindia.com](mailto:marketing@gravitycastindia.com)**

All information in our data sheets and website is indicative only and is not intended to be a substitute for the full specification from which it is extracted. It is intended to provide typical values to allow comparison between metal alloy option rather than a definitive statement of mechanical performance or suitability for a particular application as these will vary with temperature, product type and product application. It is presented apart from contractual obligations and does not constitute any guarantee of properties or of processing or application possibilities in individual cases. Our warranties and liabilities are stated exclusively in our terms of business.