



## Material - ASTM A447

**Standard Specification for Steel Castings, Chromium-Nickel-Iron Alloy (25-12 Class), for High-Temperature Service1**

**Group - Steel Castings**

**Sub Group - ASTM A447 / A447M Steel Castings, Chromium-Nickel-Iron Alloy (25-12 Class), for High-Temperature Service1**

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

**Grade Belongs to the Industry - Casting**

| Chemical Composition |      |                 | Heat Treatment                                    |          |
|----------------------|------|-----------------|---|----------|
| Carbon               | C %  | 0.200 - 0.450   | Normalising or Annealing or Hardening + Tempering |          |
| Silicon              | Si % | 1.750 max.      |   |          |
| Manganese            | Mn % | 2.500 max.      |   |          |
| Phosphorus           | P %  | 0.030 max.      |   |          |
| Sulphur              | S %  | 0.030 max.      |   |          |
| Chromium             | Cr % | 23.000 - 28.000 |   |          |
| Nickel               | Ni % | 10.000 - 14.000 |   |          |
| Nitrogen             | N %  | 0.200 max.      |   |          |
| Iron                 | Fe % | Balance         |   |          |
| -                    | -    | -               |   |          |
|                      |      |                 | Mechanical Properties                             |          |
|                      |      |                 | Tensile Strength in Mpa                           | 550 min. |
|                      |      |                 | Yield Strength in Mpa                             | -        |
|                      |      |                 | Elongation in %                                   | 4 min.   |
|                      |      |                 | Reduction of Area in %                            | -        |
|                      |      |                 | Hardness in BHN                                   | -        |
|                      |      |                 | Impact in Joule                                   | -        |

| Cross Reference Table |          |         |                              |
|-----------------------|----------|---------|------------------------------|
| Material              | Standard | Country | Grade Belong to the Industry |
| Gx 32 CrNi28-10       | DIN      | Germany | Casting                      |
| Gx 32 CrNi28-09       | UNI      | Italy   | Casting                      |
| J93303                | UNS      | USA     | Casting                      |
| 1.4339                | DIN      | Germany | Casting                      |
| 309                   | SAE      | USA     | Bar, Wire, Shape and Forging |
| 309                   | SAE      | USA     | Bar, Wire, Shape and Forging |
| 309                   | AISI     | USA     | Bar, Wire, Shape and Forging |

**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)**

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