



**GRAVITY CAST PVT. LTD.**  
**GRAVITY GROUP OF COMPANIES**

## Material - ASTM A217 Grade C12

**Standard Specification for Steel Castings, Martensitic Stainless and Alloy, for Pressure-Containing Parts, Suitable for High-Temperature Service**

**Group - Ferrous Mild Steel Alloys**

**Sub Group - ASTM A217 / A217M Steel Castings, Martensitic Stainless and Alloy, for Pressure-Containing Parts, Suitable for High-Temperature Service**

**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 max.     | Normalising or Annealing or Hardening + Tempering |  |
| Silicon              | Si % | 1.000 max.     |                                                   |  |
| Manganese            | Mn % | 0.350 - 0.650  |                                                   |  |
| Phosphorus           | P %  | 0.035 max.     |                                                   |  |
| Sulphur              | S %  | 0.035 max.     |                                                   |  |
| Chromium             | Cr % | 8.000 - 10.000 |                                                   |  |
| Nickel               | Ni % | 0.500 max.     |                                                   |  |
| Molybdenum           | Mo % | 0.900 - 1.200  |                                                   |  |
| Copper               | Cu % | 0.500 max.     |                                                   |  |
| Vanadium             | V %  | 0.060 max.     |                                                   |  |
| Niobium              | Nb % | 0.030 max.     |                                                   |  |
| Tungsten             | W %  | 0.100 max.     |                                                   |  |
| Other                | %    | 1.000 max.     |                                                   |  |
| Iron                 | Fe % | Balance        |                                                   |  |
| -                    | -    | -              |                                                   |  |
| -                    | -    | -              |                                                   |  |
| -                    | -    | -              |                                                   |  |

| Cross Reference Table |          |         |                              |
|-----------------------|----------|---------|------------------------------|
| Material              | Standard | Country | Grade Belong to the Industry |
| J82090                | UNS      | USA     | Casting                      |
| SA-217 Grade GC12     | ASTM     | USA     | Casting                      |
| A426 Grade CP9        | ASTM     | USA     | Casting                      |
| G X 12 CrMo 10-1      | DIN      | Germany | Casting                      |
| 1.7389                | DIN      | Germany | Casting                      |
| A217 Grade C12A       | ASTM     | USA     | Casting                      |
| A217 J84090           | 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.

**ONE STOP SOLUTION FOR METAL PARTS**