



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

## Material - ASTM A 1040 12L14

Standard Specification For Carbon Steel Compositions For Forging To Hot-Rolled And Cold-Finished Steel

Group - Ferrous Mild Steel Alloys

Sub Group - ASTM A 1040 12L14 Carbon Steel Compositions For Forging To Hot-Rolled And Cold-Finished Steel

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

Grade Belongs to the Industry - Steel

| Chemical Composition |      |               | Heat Treatment  |  |                         |           |
|----------------------|------|---------------|---|--|-------------------------|-----------|
| Carbon               | C %  | 0.150 max.    | As Raw or Annealing or Normalizing or Hardening and Tempering |  |                         |           |
| Manganese            | Mn % | 0.850 - 1.150 |   |  |                         |           |
| Phosphorus           | P %  | 0.040 - 0.090 |   |  |                         |           |
| Sulphur              | S %  | 0.260 - 0.350 |   |  |                         |           |
| Lead                 | Pb % | 0.150 - 0.350 |   |  |                         |           |
| Iron                 | Fe % | Balance       |   |  |                         |           |
| -                    | -    | -             |   |  |                         |           |
| -                    | -    | -             | <b>Mechanical Properties</b>                                  |  |                         |           |
| -                    | -    | -             |   |  | Tensile Strength in Mpa | 390 - 540 |
| -                    | -    | -             |   |  | Yield Strength in Mpa   | 230 min.  |
| -                    | -    | -             |   |  | Elongation in %         | 10 min.   |
| -                    | -    | -             |   |  | Reduction of Area in %  | 35 - 45   |
| -                    | -    | -             |   |  | Hardness in HB          | 121 - 163 |
| -                    | -    | -             |   |  | Impact in Joule         | -         |
| -                    | -    | -             |   |  |                         |           |
| -                    | -    | -             |   |  |                         |           |
| -                    | -    | -             |   |  |                         |           |

| Cross Reference Table |          |         |   |
|-----------------------|----------|---------|---|
| Material              | Standard | Country | Grade Belong to the Industry                      |
| G12140                | UNS      | USA     | Bars, Wire Rods, Plates, Strip, Sheets and Tubing |
| 12L14                 | SAE      | USA     | Bars, Wire Rods, Plates, Strip, Sheets and Tubing |
| 12L14                 | AISI     | USA     | Steel and Bar                                     |
| SA-29 12L14           | ASME     | USA     | Steel   |
| A 510 12L14           | ASTM     | USA     | Wire Rod, Round Wire and Steel                    |
| A 519 12L14           | ASTM     | USA     | Tubing  |
| A 576 12L14           | ASTM     | USA     | Steel and Bar                                     |

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.

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