



## Material - ASTM A 1040 1039

**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 1039 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 %  | 0.370 - 0.440  | As Raw or Annealing or Normalizing or Hardening and Tempering |           |
| Manganese            | Mn % | 0.700 - 1.000  |   |           |
| Phosphorus           | P %  | 0.030 max.     |   |           |
| Sulphur              | S %  | 0.035 max.     |   |           |
| Boron                | B %  | 0.0005 - 0.003 |   |           |
| Silicon              | Si % | 0.100 max.     |   |           |
| Copper               | Cu % | 0.200 max.     |   |           |
| Iron                 | Fe % | Balance        |   |           |
| -                    | -    | -              | Mechanical Properties   |           |
| -                    | -    | -              | Tensile Strength in Mpa                                       | 560 - 610 |
| -                    | -    | -              | Yield Strength in Mpa   | 300 min.  |
| -                    | -    | -              | Elongation in %   | 12 min.   |
| -                    | -    | -              | Reduction of Area in %  | 35 - 40   |
| -                    | -    | -              | Hardness in HB  | 156 - 179 |
| -                    | -    | -              | Impact in Joule   | -         |

| Cross Reference Table |          |         |   |
|-----------------------|----------|---------|---|
| Material              | Standard | Country | Grade Belong to the Industry                      |
| G10390                | UNS      | USA     | Bars, Wire Rods, Plates, Strip, Sheets and Tubing |
| 1039                  | SAE      | USA     | Steel   |
| 1039                  | AISI     | USA     | Steel and Bar                                     |
| A 29 1039             | ASTM     | USA     | Steel and Bar                                     |
| A 510 1039            | ASTM     | USA     | Wire Rod and Round Wire                           |
| A 576 10L39           | ASTM     | USA     | Steel and Bar                                     |
| A 830 1039            | ASTM     | USA     | Plates and Steel                                  |

**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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