GRAVITY CAST PVT. LTD.
GRAVITY GROUP OF COMPANIES

# Material - ASTM A29 81B45

## Standard Specification for Steel Bars, Carbon and Alloy, Hot-Wrought, General Requirements for

**Group - Ferrous Mild Steel Alloys**
**Sub Group - ASTM A29 81B45 Steel Bars, Carbon and Alloy, Hot-Wrought, General Requirements for**
**Application - Intended for Valve, Pump, General Engineering, Automotive and Other Industries**
**Grade Belongs to the Industry - Steel and Bars**

| Chemical Composition | | |
|---|---|---|
| Carbon | C % | 0.430 - 0.480 |
| Manganese | Mn % | 0.750 - 1.000 |
| Phosphorus | P % | 0.035 max. |
| Sulphur | S % | 0.040 max. |
| Silicon | Si % | 0.150 - 0.350 |
| Nickel | Ni % | 0.200 - 0.400 |
| Chromium | Cr % | 0.350 - 0.550 |
| Molybdenum | Mo % | 0.080 - 0.150 |
| Iron | Fe % | Balance |
| - | - | - |
| - | - | - |
| - | - | - |
| - | - | - |
| - | - | - |
| - | - | - |

| Heat Treatment |
|---|
| As-Raw or Annealing or Normalizing or Hardening + Tempering |

| Mechanical Properties | |
|---|---|
| Tensile Strength in Mpa | - |
| Yield Strength in Mpa | - |
| Elongation in % | - |
| Reduction of Area in % | - |
| Hardness in HB | - |
| Impact in Joule | - |

| Cross Reference Table | | | |
|---|---|---|---|
| **Material** | **Standard** | **Country** | **Grade Belong to the Industry** |
| G81451 | UNS | USA | Steel |
| SAE J 1249 81B45 | AISI | USA | Steel |
| J 1249 81B45 | SAE | USA | Steel |
| SA-29 81B45 | ASME | USA | Steel and Bars |
| A 519 81B45 | ASTM | USA | Steel and Tubing |
| A 752 Grade 81B45 | ASTM | USA | Wire and Wire Rods |
| A 322 81B60 | ASTM | USA | Steel and Bars |

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

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