

## Material: SAE J403 | SAE J1397 UNS G10380 - Hot Rolled Standard Specification For Carbon Steel Compositions For Forging To Hot-Rolled And Cold-Finished Bars, To Wire Rods, Plates, Strip, Sheets and Tubing

**Group:** Ferrous Mild Steel Alloys

**Sub Group:** SAE J403 | SAE J1397 UNS G10380 - Hot Rolled Carbon Steel Compositions For Forging To Hot-Rolled And Cold-Finished Bars, Wire Rods, Plates, Strip, Sheets and Tubing

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

**Grade Belongs to the Industry:** Bars, Wire Rods, Plates, Strip, Sheets and Tubing

| Chemical Composition |      |               | Heat Treatment                                                |          |
|----------------------|------|---------------|---------------------------------------------------------------|----------|
| Carbon               | C %  | 0.350 - 0.420 | As Raw or Annealing or Normalizing or Hardening and Tempering |          |
| Manganese            | Mn % | 0.600 - 0.900 |                                                               |          |
| Phosphorus           | P %  | 0.030 max.    |                                                               |          |
| Sulphur              | S %  | 0.050 max.    |                                                               |          |
| Iron                 | Fe % | Balance       |                                                               |          |
| -                    | -    | -             |                                                               |          |
| -                    | -    | -             |                                                               |          |
| -                    | -    | -             |                                                               |          |
| -                    | -    | -             |                                                               |          |
| -                    | -    | -             |                                                               |          |
|                      |      |               | Mechanical Properties                                         |          |
| -                    | -    | -             | Tensile Strength in Mpa                                       | 520 min. |
| -                    | -    | -             | Yield Strength in Mpa                                         | 280 min. |
| -                    | -    | -             | Elongation in %                                               | 18 min.  |
| -                    | -    | -             | Reduction of Area in %                                        | 40 min.  |
| -                    | -    | -             | Hardness in HB                                                | 149 max. |
| -                    | -    | -             | Impact in Joule                                               | -        |

| Cross Reference Table |          |         |                                                   |
|-----------------------|----------|---------|---------------------------------------------------|
| Material              | Standard | Country | Grade Belong to the Industry                      |
| 1038                  | SAE      | USA     | Bars, Wire Rods, Plates, Strip, Sheets and Tubing |
| 1038                  | AISI     | USA     | Steel and Bar                                     |
| A 1040 1038           | ASTM     | USA     | Steel                                             |
| A 29 1038             | ASTM     | USA     | Steel and Bar                                     |
| A 510 1038            | ASTM     | USA     | Wire Rod and Round Wire                           |
| A 576 10L38           | ASTM     | USA     | Steel and Bar                                     |
| A 830 1038            | ASTM     | USA     | Plates and Steel                                  |

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