

# Material: EN 10083-3 1.6773

## Standard Specification for Mild Steel Alloys Bar and Rod

**Group:** Ferrous Mild Steel Alloys

**Sub Group:** EN 10083-3 1.6773 Mild Steel Alloys Bar and Rod

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

**Grade Belongs to the Industry:** Bar and Rod

| Chemical Composition |      |               | Heat Treatment                                                |             |
|----------------------|------|---------------|---------------------------------------------------------------|-------------|
| Carbon               | C %  | 0.320 - 0.390 | As Raw or Annealing or Normalizing or Hardening and Tempering |             |
| Silicon              | Si % | 0.400 max.    |                                                               |             |
| Manganese            | Mn % | 0.500 - 0.800 |                                                               |             |
| Phosphorus           | P %  | 0.025 max.    |                                                               |             |
| Sulphur              | S %  | 0.025 max.    |                                                               |             |
| Chromium             | Cr % | 1.600 - 2.000 |                                                               |             |
| Molybdenum           | Mo % | 0.250 - 0.450 |                                                               |             |
| Nickel               | Ni % | 3.600 - 4.100 |                                                               |             |
| Iron                 | Fe % | Balance       | Mechanical Properties                                         |             |
| -                    | -    | -             | Tensile Strength in Mpa                                       | 1000 - 1200 |
| -                    | -    | -             | Yield Strength in Mpa                                         | 800 min.    |
| -                    | -    | -             | Elongation in %                                               | 11 min.     |
| -                    | -    | -             | Reduction of Area in %                                        | -           |
| -                    | -    | -             | Hardness in BHN                                               | As Per HT   |
| -                    | -    | -             | Impact in Joule                                               | 45 J @ RT   |

| Cross Reference Table |          |                |                              |
|-----------------------|----------|----------------|------------------------------|
| Material              | Standard | Country        | Grade Belong to the Industry |
| 35NiCrMo16            | EN       | European Union | Bar and Rod                  |
| 35 NCD 16             | AFNOR NF | France         | Bar, Wire and Rod            |
| 835 M 30              | BS       | British        | Bar and Rod                  |
| SFNCM 1030 R          | JIS      | Japan          | Forging                      |
| SFNCM 830 R           | JIS      | Japan          | Forging                      |
| SFNCM 880 R           | JIS      | Japan          | Forging                      |
| SFNCM 930 R           | JIS      | Japan          | Forging                      |

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