

# Material: EN 10083-3 1.7037

## Standard Specification for Mild Steel Alloys Bar and Rod

**Group:** Ferrous Mild Steel Alloys

**Sub Group:** EN 10083-3 1.7037 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 %  | 0.300 - 0.370 | As Raw or Annealing or Normalizing or Hardening and Tempering                                                                                                                                                        |  |
| Silicon              | Si % | 0.400 max.    |                                                                                                                                                                                                                      |  |
| Manganese            | Mn % | 0.600 - 0.900 |                                                                                                                                                                                                                      |  |
| Phosphorus           | P %  | 0.025 max.    |                                                                                                                                                                                                                      |  |
| Sulphur              | S %  | 0.020 - 0.040 |                                                                                                                                                                                                                      |  |
| Chromium             | Cr % | 0.900 - 1.200 |                                                                                                                                                                                                                      |  |
| Iron                 | Fe % | Balance       |                                                                                                                                                                                                                      |  |
| -                    | -    | -             | <b>Mechanical Properties</b><br>Tensile Strength in Mpa 700 - 850<br>Yield Strength in Mpa 460 min.<br>Elongation in % 15 - 45<br>Reduction of Area in % -<br>Hardness in BHN As Per HT<br>Impact in Joule 40 J @ RT |  |
| -                    | -    | -             |                                                                                                                                                                                                                      |  |
| -                    | -    | -             |                                                                                                                                                                                                                      |  |
| -                    | -    | -             |                                                                                                                                                                                                                      |  |
| -                    | -    | -             |                                                                                                                                                                                                                      |  |
| -                    | -    | -             |                                                                                                                                                                                                                      |  |
| -                    | -    | -             |                                                                                                                                                                                                                      |  |
| -                    | -    | -             |                                                                                                                                                                                                                      |  |

| Cross Reference Table |          |                |                              |
|-----------------------|----------|----------------|------------------------------|
| Material              | Standard | Country        | Grade Belong to the Industry |
| 34CrS4                | EN       | European Union | Bar and Rod                  |
| 34Cr4                 | EN       | European Union | Bar and Rod                  |
| 1.7033                | EN       | European Union | Bar and Rod                  |
| 34 Cr 4 E             | ISO      | International  | Bar and Rod                  |
| 34 Cr 4 E             | JIS      | Japan          | Bar and Rod                  |
| 1.7037                | BDS      | Bulgaria       | Bar and Rod                  |
| 34CrS4                | BDS      | Bulgaria       | Bar and Rod                  |

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