

## Material: DIN 1.5531

### Standard Specification for Mild Steel Alloys Bar and Rod

**Group:** Ferrous Mild Steel Alloys

**Sub Group:** DIN 1.5531 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 %  | 0.270 - 0.330   | As Raw or Annealing or Normalizing or Hardening and Tempering                                                                                                                                                       |  |
| Silicon              | Si % | 0.400 max.      |                                                                                                                                                                                                                     |  |
| Manganese            | Mn % | 1.150 - 1.450   |                                                                                                                                                                                                                     |  |
| Phosphorus           | P %  | 0.025 max.      |                                                                                                                                                                                                                     |  |
| Sulphur              | S %  | 0.035 max.      |                                                                                                                                                                                                                     |  |
| Boron                | B %  | 0.0008 - 0.0050 |                                                                                                                                                                                                                     |  |
| Iron                 | Fe % | Balance         |                                                                                                                                                                                                                     |  |
| -                    | -    | -               |                                                                                                                                                                                                                     |  |
| -                    | -    | -               | <b>Mechanical Properties</b><br>Tensile Strength in Mpa 800 - 1150<br>Yield Strength in Mpa 650 min.<br>Elongation in % 13 min.<br>Reduction of Area in % 50 min.<br>Hardness in BHN -<br>Impact in Joule 60 J @ RT |  |
| -                    | -    | -               |                                                                                                                                                                                                                     |  |
| -                    | -    | -               |                                                                                                                                                                                                                     |  |
| -                    | -    | -               |                                                                                                                                                                                                                     |  |
| -                    | -    | -               |                                                                                                                                                                                                                     |  |
| -                    | -    | -               |                                                                                                                                                                                                                     |  |
| -                    | -    | -               |                                                                                                                                                                                                                     |  |
| -                    | -    | -               |                                                                                                                                                                                                                     |  |

| Cross Reference Table |          |                |                              |
|-----------------------|----------|----------------|------------------------------|
| Material              | Standard | Country        | Grade Belong to the Industry |
| 30MnB5                | EN       | European Union | Bar and Rod                  |
| 1.5531                | EN       | European Union | Bar and Rod                  |
| 30MnB5                | ISO      | International  | Bar and Rod                  |
| 30MnB5                | DIN      | Germany        | Bar and Rod                  |
| 1.5531                | BDS      | Bulgaria       | Bar and Rod                  |
| 30MnB5                | BDS      | Bulgaria       | Bar and Rod                  |
| 1.5531                | CSN      | Czech Republic | Bar and Rod                  |

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