RAUNAQ
STEELS TRADING
PRIVATE LIMITED

# E250C – Technical Datasheet

## 1. Chemical & Mechanical Properties

### A. Chemical Composition

| Element | % Composition |
|---|---|
| **Carbon (C)** | ≤ 0.22% |
| **Manganese (Mn)** | ≤ 1.50% |
| **Sulphur (S)** | ≤ 0.045% |
| **Phosphorus (P)** | ≤ 0.045% |
| **Silicon (Si)** | ≤ 0.45% |
| **Carbon Equivalent (CE)** | ≤ 0.42% |

### B. Mechanical Properties

| Property | Value |
|---|---|
| **Yield Strength (YS)** | ≥ 250 MPa (for ≤ 20mm thickness) |
| **Tensile Strength (TS)** | 410 – 540 MPa |
| **Elongation** | ≥ 23% |
| **Hardness** | 130 – 170 HB (approx) |
| **Impact Test** | 27J min at 0°C (Charpy V-Notch test) |

## 2. Equivalent / Alternative Grades

### A. Chemical Composition Comparison

| Standard | Grade | C (%) | Mn (%) | P (%) | S (%) | Si (%) |
|---|---|---|---|---|---|---|
| **IS 2062** | E250C | ≤ 0.22 | ≤ 1.50 | ≤ 0.045 | ≤ 0.045 | ≤ 0.45 |
| **EN 10025-2** | S275JR | ≤ 0.21 | ≤ 1.50 | ≤ 0.045 | ≤ 0.045 | ≤ 0.50 |
| **ASTM A36** | A36 | ≤ 0.26 | 0.60–0.90 | ≤ 0.04 | ≤ 0.05 | 0.15–0.40 |
| **JIS G3101** | SS400 | ≤ 0.21 | 0.60–1.20 | ≤ 0.050 | ≤ 0.050 | - |

### B. Mechanical Properties Comparison

| Standard | Grade | Yield Strength (MPa) | Tensile Strength / Elongation |
|---|---|---|---|

| | | | |
|---|---|---|---|
| **IS 2062** | E250C | ≥ 250 | 410 – 540 MPa / ≥ 23% |
| **EN 10025-2** | S275JR | ≥ 275 | 410 – 560 MPa / ≥ 20% |
| **ASTM A36** | A36 | ≥ 250 | 400 – 550 MPa / 20% – 23% |
| **JIS G3101** | SS400 | ≥ 245 | 400 – 510 MPa / ≥ 20% |

## 3. Common Applications

- General structural steel fabrication
- Bridges and building frames
- Machinery and equipment parts
- Construction and infrastructure projects
- Base plates, frames, and light structural members

## 4. Standard Conformance

IS 2062:2011 – Indian Standard for Hot Rolled Medium and High Tensile Structural Steel.

## 5. Disclaimer

All chemical compositions, mechanical properties, dimensions and other technical data presented on this page are provided by Raunaq Steels Trading Pvt. Ltd. for general reference only. While we endeavour to ensure that the information is as accurate and up-to-date as possible, no warranty, express or implied, is given as to its completeness, correctness or fitness for any particular purpose. Raunaq Steels Trading Pvt. Ltd. accepts no liability for any loss or damage arising directly or indirectly from the use of, or reliance upon, the information contained herein.

For authoritative and legally binding specifications, users must refer to the official publications of the relevant standards—such as the BIS, ASTM, EN or JIS standards—available through their respective websites or published documents.